

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): A positive electrode active material for a secondary battery comprising a lithium manganate and a lithium nickelate, wherein said lithium manganate is a compound having a spinel structure represented by the following formula (1) or said compound in which some of Mn or O sites are replaced with another element: $\text{Li}_{1+x}\text{Mn}_{2-x}\text{O}_4$ (1) (in said formula (1) above, $0.15 \leq x \leq 0.24$).

2. (original): A positive electrode active material for a secondary battery comprising a lithium manganate and a lithium nickelate, wherein said lithium manganate is a particle compound having a spinel structure represented by the following formula (1) or said compound in which some of Mn or O sites are replaced with another element; and

an Mn elution amount when immersing said particles in a mixture comprising an electrolyte salt and a carbonate solvent is 1000 ppm or less as determined by inductive coupling plasma emission analysis: $\text{Li}_{1+x}\text{Mn}_{2-x}\text{O}_4$ (1)(in said formula (1) above, $0.15 \leq x \leq 0.24$).

3. (original): A positive electrode active material for a secondary battery comprising a lithium manganate and a lithium nickelate,

wherein said lithium manganate is a particle compound having a spinel structure represented by the following formula (1) or said compound in which some of Mn or O sites are replaced with another element; and

RESPONSE TO NOTICE OF NON-COMPLIANT AMENDMENT
U.S. APPLICATION NO. 10/522,594

a specific surface area of said particles as determined by the BET method is $0.3 \text{ m}^2/\text{g}$ to $0.8 \text{ m}^2/\text{g}$ both inclusive:

$\text{Li}_{1+x}\text{Mn}_{2-x}\text{O}_4$ (1)(in said formula (1) above, $0.15 \leq x \leq 0.24$).

4. (currently amended): The positive electrode active material for a secondary battery according to ~~any of Claims 1 to 3~~ claim 1, wherein said lithium nickelate is a compound represented by the following formula (2) or said compound in which some of Co or O sites are replaced with another element:

$\text{LiNi}_{1-y}\text{Co}_y\text{O}_2$ (2)(in said formula (2) above, $0.05 \leq y \leq 0.5$).

5. (original): The positive electrode active material for a secondary battery according to Claim 4, wherein said lithium nickelate is a compound represented by the following formula (3):

$\text{LiNi}_{1-\alpha-\beta}\text{Co}_\alpha\text{M}_\beta\text{O}_2$ (3)

(in said formula (3) above, M comprises at least one of Al and Mn; $0.1 \leq \alpha \leq 0.47$; $0.03 \leq \beta \leq 0.4$; and $0.13 \leq \alpha + \beta \leq 0.5$).

6. (currently amended): The positive electrode active material for a secondary battery according to ~~any of Claims 1 to 3~~ claim 1, wherein said lithium nickelate is a compound represented by the following formula (4): $\text{LiNi}_{1-p-q}\text{Co}_p\text{M}_q\text{O}_2$ (4)

(in said formula (4) above, M comprises at least one of Al and Mn; $0.1 \leq p \leq 0.5$; $0.03 \leq q \leq 0.5$; and $0.13 \leq p + q < 1$).

7. (currently amended): The positive electrode active material for a secondary battery as claimed in ~~any of Claims 1 to 6~~ claim 1, wherein when a weight ratio of said lithium manganate to said lithium nickelate is $a/(100-a)$, "a" is in a range of $20 \leq a \leq 80$.

RESPONSE TO NOTICE OF NON-COMPLIANT AMENDMENT
U.S. APPLICATION NO. 10/522,594

8. (currently amended): A positive electrode for a secondary battery comprising said positive electrode active material for a secondary battery as claimed in ~~any of Claims 1 to 7~~ claim 1 which is bound via a binder.

9. (currently amended): A secondary battery comprising at least a positive electrode and a negative electrode, comprising said positive electrode active material for a secondary battery as claimed in ~~any of Claims 1 to 7~~ claim 1.

10. (original): The secondary battery as claimed in Claim 9, wherein said negative electrode comprises amorphous carbon as a negative electrode active material.

11. (currently amended): A process for manufacturing said positive electrode active material for a secondary battery as claimed in ~~any of Claims 1 to 7~~ claim 1, comprising the steps of: mixing an Mn source and an Li source to prepare a first mixture, which is then subjected to a first calcination at a temperature of no less than 800 °C; and

mixing a first-calcination product obtained by said first calcination with said Li source to prepare a second mixture with a higher rate of said Li source than said first mixture, and conducting a second calcination of said second mixture at a temperature of no less than 450 °C and lower than said first calcination to obtain said lithium manganate,

wherein a D₅₀ particle size of said Li source is 2 μm or less.